Work Order ID 100485

100485

April-22-13 1:41:29 PM

Item ID: D3953-3 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Gas Spring Stud, Lid

Start Date: 4/22/13 **Start Qty:** 30.00 *30*

Required Date: 5/07/13 **Req'd Qty:** 30.00 *30*

Reference:

Cust Item ID:

Customer:

Run Start *NR1*

Stop *NR2*

Approvals: **Process Plan:** ML5 **Date:** 13-04-25 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D3953	C								
100		0.00				30	Ø		
100									
Doosan	**Memo**	0.00							
Doosan Lathe	Turn as per folio FA852 & DWG FOLIO REV: C DWG REV: _____	SJ 13-5-3							
	DEBURR								
110	QC2- Inspect parts off machine FAI/FAIB	0.00				30	Ø		
110									
QC	**Memo**	0.00 SJ 13-5-3							
Quality Control									

DQA: _____ Date: _____

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐
- ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric to O/S
- ☐ Cracks
- ☐ Crushed/Crimped
- ☐ Cuffs
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Ripples in Bend
- ☐ Torque Waves in Extrusion
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damaged
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Ovalized
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____

_____

_____

Work Order ID 100485

100485

April-22-13 1:41:29 PM

Item ID: D3953-3 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Gas Spring Stud, Lid

Start Date: 4/22/13 **Start Qty:** 30.00 *30* **Cust Item ID:**

Required Date: 5/07/13 **Req'd Qty:** 30.00 *30* **Customer:**

Reference:

Run Start *NR1*

Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00	D.a 13/05/06			30	ø		DAS 08
120 QC Quality Control	**Memo**	0.00							
130	Identify as per dwg & Stock Location: ST076	0.00				30x			SP 13-5-7
130 Packaging Packaging	**Memo**	0.00							
140	QC21- Final Inspection - Work Order Release	0.00							13/5/13
140 QC Quality Control	**Memo**	0.00							

QB05.7

DQA: _____ Date: _____

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

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- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Work Order Update ☐

AGAINST DEPARTMENT/PROCESS

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- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐
- ☐

Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

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- ☐ Drill Holes
- ☐ Drawing
- ☐ Finish
- ☐ Folio
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete
- ☐ Instructions Incomplete/Unclear
- ☐ Maintenance
- ☐ Mislabeled
- ☐ Misread
- ☐ Offset
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
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- ☐ Over/Under tolerance
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- ☐ Part Moved
- ☐ Positioned Wrong
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- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

_____

_____

_____

Picklist Print

April-22-13 1:41:29 PM

Work Order ID: 100485

Parent Item: D3953-3 **Start Date:** 4/22/13 **Required Date:** 5/07/13

Parent Item Name: Gas Spring Stud, Lid **Start Qty:** 30.00 **Required Qty:** 30.00

Comments: IPP RevA: New issue DD verified by:EC IPP Rev:B as per dwg revC DD
10.03.02 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304RO.750 304 SS Roundbar .750		Purchased	No			100	f	80.4390	**0.125**	**3.947367**			

Location	Loc Qty	Loc Code
MAT028	64.005	
116501	3.492	
116623	1.708	
121282	4.89	
122386	5.066	
123721	48.849	4 RT
MAT029	16.434	
117481	3.434	
118509	12.4	
120124	0.6	

DQA: _____ Date: _____

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date:

Work Order: _____

Part No. _____

NCR No. _____

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- Supplier ☐
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Root Cause		Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data	☐									
Equip/Tooling	☐									
Operator	☐									
Material	☐									
Setup	☐									
Other	☐									
Process	☐									
Supplier	☐									
Training	☐									
Unapproved	☐									

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- ☐ Pressure/Forced
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other _____

DART AEROSPACE LTD	Work Order:	100485
Description: Gas Spring Stud, Lid	Part Number:	D3953-3
Inspection Dwg: D3953 Rev: C		Page 1 of 1

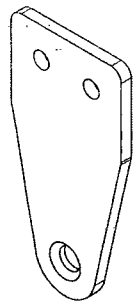
FIRST ARTICLE INSPECTION CHECKLIST

[X] First Article [ ] Prototype

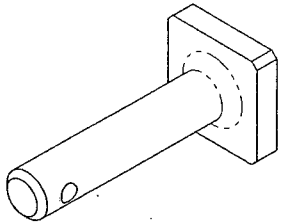
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.75	+/-0.030	0.75	✓		SA-9	Vern
0.56	+/-0.010	.570	✓			
0.281	+/-0.010	.287	✓			
1/4-28 UNF-2A	N/A		✓			
Major Ø	Max = 0.2490 Min = 0.2425	.2435	✓			
M.O.W.	Max = 0.26687 Min = 0.26357	.265	✓			
Ø0.098	+0.004/-0.001	.099	✓			
Ø0.250	+/-0.010	.243	✓			
0.170	+/-0.010	.169	✓			
0.330	+/-0.010	.330	✓			
0.13	+/-0.030	.133	✓			
R0.06	+/-0.030	R.06	✓			
1.31	+/-0.030	1.317	✓			

Measured by:		Audited by:	DAS 08	Prototype Approval:	N/A
Date:	13-5-3	Date:	13/05/06 8-89	Date:	N/A

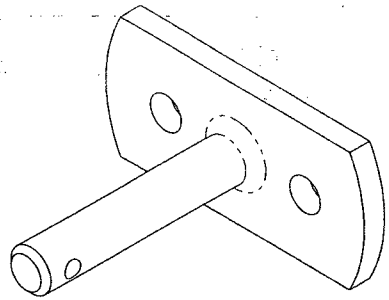
Rev	Date	Change	Revised by	Approved
A	09.10.22	New Issue	KJ	
B	09.12.14	Dwg Rev updated	KJ	



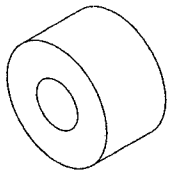
D3953-1 GAS SPRING BRACKET
(FULL LID)



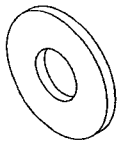
D3953-3 GAS SPRING STUD, LID



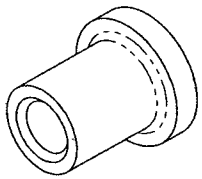
D3953-5 GAS SPRING STUD, BASE



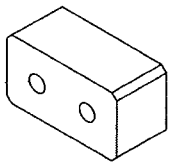
D3953-7 GAS SPRING SPACER



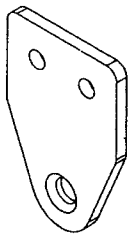
D3953-9 GAS SPRING WASHER



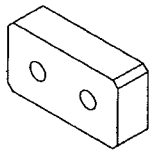
D3953-11 GAS SPRING SPACER



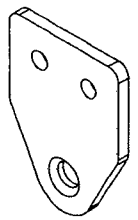
D3953-13 GAS SPRING SPACER
(FULL LID)



D3953-15 GAS SPRING BRACKET
(SPLIT LID)

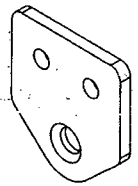


D3953-17 GAS SPRING SPACER
(SPLIT LID)



D3953-19 GAS SPRING BRACKET
(SQUARE BASKET)
△C

RELEASED
2010 -02- 26



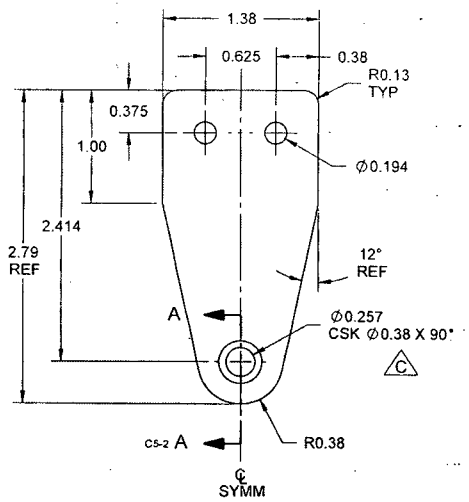
D3953-21 GAS SPRING BRACKET
(SQUARE BASKET)
△C

100485 MCJ
13-04-25

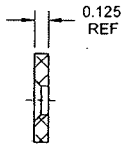
REV.	DESCRIPTION	BY	DATE
C	PARTS -19 & -21 ADDED (SHT 1& 4); CSK CALLOUT WAS CHAM (C6-2, B6-3, C6-4); ℄ SYMM WAS ℄ SYM ABOUT (C7-2, C7-4); SECTION C-C REPOSITIONED TO B2-4 REASON: ADDL PARTS REQD; DRAFTING ERRORS	JPH	10.01.29
B	SHEET 3 ZONE C1, DIM 0.05 MIN WAS 0.13, MULTIPLE DIMENSIONS MIN/MAX REMOVED TOLERANCE ADDED. REASON: DIFFICULTY INSTALLING COTTER PIN AT NEXT ASSY.	AJS	09.11.11
A	NEW ISSUE	AJS	09.07.27

DESIGN	AJS	**DART AEROSPACE LTD**	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D3953	REV. C
MFG. APPR.			SHEET 1 OF 4
APPROVED		TITLE GAS SPRING LID COMPONENTS	SCALE NTS
DE APPR.			
DATE	10.01.29		

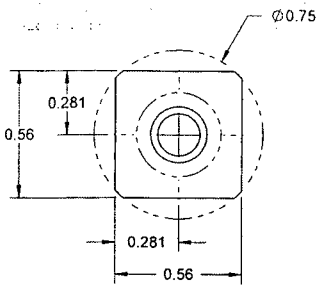
100485

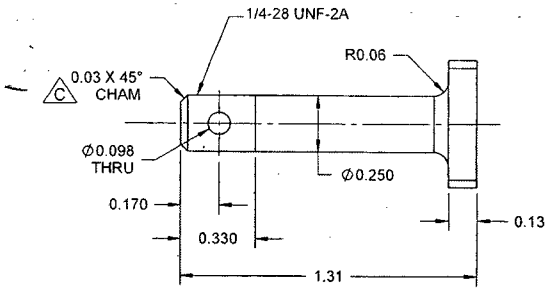


D3953-1 GAS SPRING BRACKET
(FULL LID)



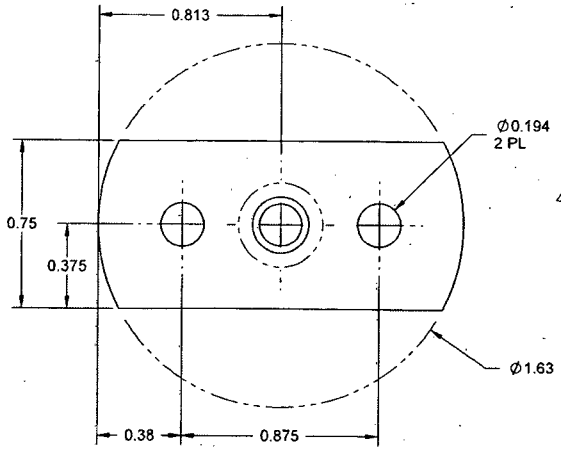
SECTION A-A C7-2

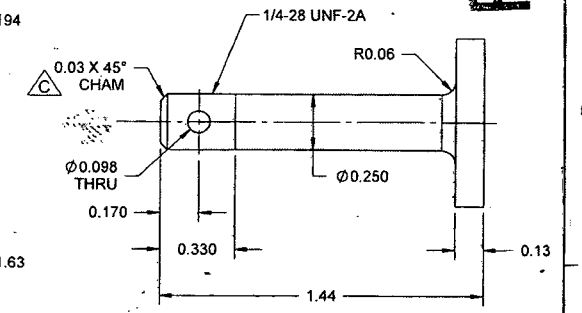




D3953-3 GAS SPRING STUD, LID

RELEASED
2010-02-26





D3953-5 GAS SPRING STUD, BASE

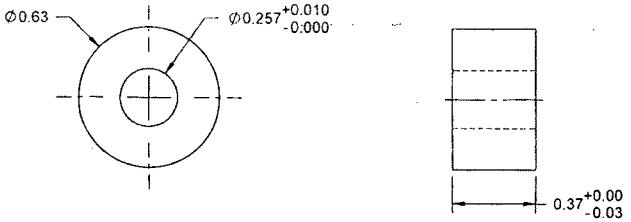
NOTES:
1) MATERIAL -1: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH,
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240
REF DART SPEC M304S11GA

-3 & -5: AISI 304 STAINLESS STEEL BAR
REF DART SPEC M304B
OR:
AISI 304/316 STAINLESS STEEL ROD
REF DART SPEC M304R

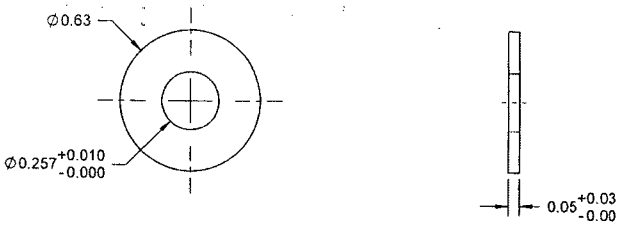
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3953-X" USING FINE POINT PERMANENT INK MARKER
7) WEIGHT -1: 0.11 lbs
-3: 0.03 lbs
-5: 0.06 lbs

DESIGN	AJS	**DART AEROSPACE LTD**
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D3953 REV. C
MFG. APPR.		SHEET 2 OF 4
APPROVED		TITLE GAS SPRING LID COMPONENTS SCALE NTS
DE APPR.		
DATE 10.01.29		

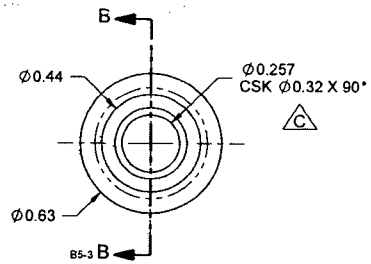
100485



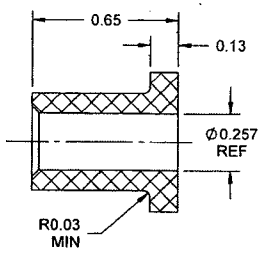
D3953-7 GAS SPRING SPACER



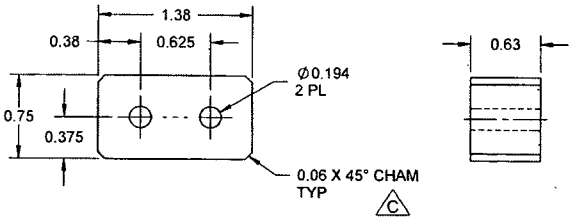
D3953-9 GAS SPRING WASHER



D3953-11 GAS SPRING SPACER



SECTION B-B B7-3



D3953-13 GAS SPRING SPACER

RELEASED
2010 -02- 26

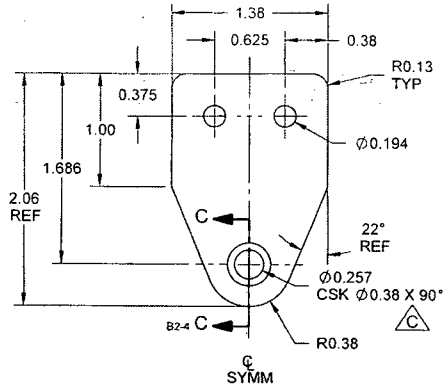
NOTES:
1) MATERIAL -7,-9 & -11: DELRIN II 150E OR ACETRON GP ACETAL, BLACK
REF DART SPEC M-DELRIN-R

-13: AISI 304 STAINLESS STEEL BAR
REF DART SPEC M304B

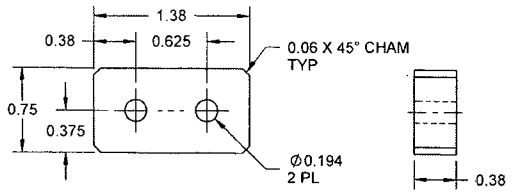
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION -13 ONLY: IDENTIFY WITH DART P/N "D3953-13" USING FINE POINT PERMANENT INK MARKER
7) WEIGHT -7/-9/-11: < 0.01 lbs EACH
-13: 0.17 lbs

DESIGN	AJS	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	JPH	
CHECKED		DRAWING NO. D3953 REV. C
MFG. APPR.		SHEET 3 OF 4
APPROVED		TITLE GAS SPRING LID COMPONENTS SCALE NTS
DE APPR.		
DATE	10.01.29	

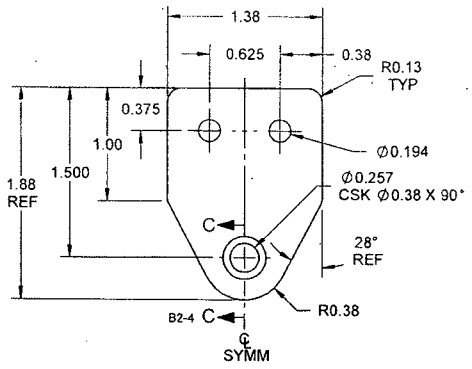
100485



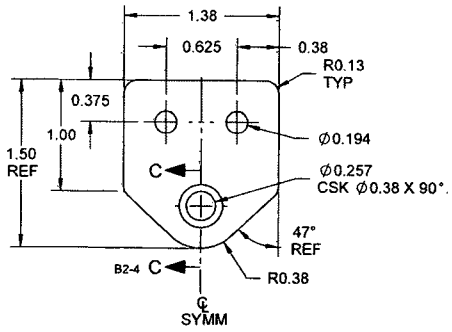
D3953-15 GAS SPRING BRACKET
(SPLIT LID)



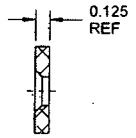
D3953-17 GAS SPRING SPACER
(SPLIT LID)



D3953-19 GAS SPRING BRACKET
(SQUARE BASKET)
C



D3953-21 GAS SPRING BRACKET
(SQUARE BASKET)
C



SECTION C-C C7-4 C2-4 B4-4
C

RELEASED
2010 -02- 26

NOTES:
1) MATERIAL -15/-19/-21: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH,
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240
REF DART SPEC M304S11GA

-17: AISI 304 STAINLESS STEEL BAR
REF DART SPEC M304B

2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3953-X" USING FINE POINT PERMANENT INK MARKER
7) WEIGHT -15: 0.08 lbs
-17: 0.10 lbs
-19: 0.07 lbs
-21: 0.06 lbs
C

DESIGN	AJS	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	JPH	
CHECKED		DRAWING NO. D3953 REV. C
MFG. APPR.		SHEET 4 OF 4
APPROVED		TITLE GAS SPRING LID COMPONENTS SCALE NTS
DE APPR.		
DATE 10.01.29		